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ABSTRACT

Youth apprenticeships have the potential to address simultaneously two national dilemmas: how to prepare U.S. business and its workers for a high skills future and how to upgrade the academic skills of all students. The highly successful German model may require some modification to work well in the United States. The biggest change may have to take place in the attitudes of many people who are suspicious of a system that induces students to make career choices at a young age and requires a large amount of government oversight. Apprenticeships will not succeed unless business considers them a sound investment. The first step is creation of incentives for businesses to become partners with schools, hire young people, provide appropriate training, and assume a portion of the cost. For apprenticeships to succeed, schools will have to change their methods, schedules, and assumptions. Teachers must become more knowledgeable about employment and learn to work as partners with the business community; teaching methods must reinforce what apprenticing students learn on the job; the schedule must become more flexible; and schools must provide information regarding benefits to students and their families. The Federal Government can rewrite federal regulations to spell out how youth apprenticeship fits into existing laws, provide subsidies, and pass a national youth service law. Obstacles to change include tracking, union concerns, and lack of student aid. (YLB)

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October 1992

The Challenge: To enhance the competitiveness of American workers through a system of youth apprenticeships that forges stronger links between enterprises and schools.

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What does the research tell us?**What do we do about it?****Enterprises**

Companies invest disproportionately in training for upper- or middle-management and often ignore the training needs of front-line workers.

Provide training that enables young workers to assume greater responsibility. Create links with other firms—and between schools and firms—to facilitate the creation of extensive apprenticeship systems.

Schools

Schools do not stress the importance of academic success for those whose futures do not include college.

Stress a combination of academic and practical knowledge. Encourage teachers to become familiar with the skills that employers seek and to adopt teaching methods that emphasize those skills. Become more explicit about student choices.

Workers

Many students and parents dislike the stigma and confinement of apprenticeship training; many workers feel little obligation to the firms that train them.

Recognize, as students, the value of learning-by-doing and incorporating academic and practical knowledge. Establish, as workers, a dedication to a firm that provides training.

Public Policy

Federal and state regulations often provide disincentives for business to invest in apprenticeships.

Provide federal support for the education and training of apprentices. Offer state funding for pilot apprenticeship programs and for training grants to schools; require businesses working with states to employ apprentices.

Youth Apprenticeships: Can They Work in America?

Imagine a car manufacturer that devotes 90 percent of its production cost to perfecting a sophisticated computer in the heart of an engine, and only 10 percent to ensuring the quality of such basics as wheels, gears, brakes, and seats. Not many would rush to buy such cars. Yet this is the very approach America has taken toward ensuring the continued quality and competitiveness of its workforce.

Unlike its European competitors, the United States lavishes attention on the human equivalent of a car's computer—the minority of students who go to college—while virtually ignoring the rest of the machine—the majority of youngsters who go directly to the office or shop floor. The costs of neglecting this so-called forgotten half are glaringly apparent in a soaring youth unemployment rate and in the legions of first-time workers ill-equipped for their jobs.

Our very language illustrates the nature of the problem. Those who are destined for a trade or vocation right after high school are called the “non-college-bound,” defined more by a future they will *not* have than by one they will have. “Artisan” and “craftsman” are still respected titles in Europe. Here, there are no positive words to describe people who aspire to something other than a college degree or a professional life.

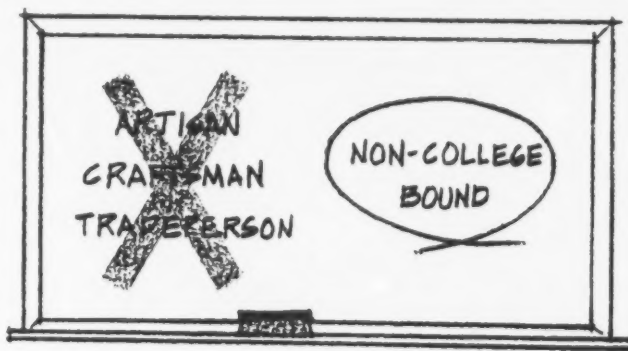
America can no longer afford to neglect and demean a majority of its workforce. In today's fiercely competitive climate, allowing any student to sink or swim is both wasteful and dangerous. Studies ranging from *America's Choice: High Skills or Low Wages* to the Secretary's Commission on Achieving Necessary Skills (SCANS) report forecast a bleak future for the United States as a second-tier industrial na-

tion unless businesses and schools start working together now to prepare *all* young people for work.

A proven, effective way to ensure that America's workforce will be both high-quality and up to the challenges of global competition is to expand opportunities for youth apprenticeship.

What is Youth Apprenticeship?

Youth apprenticeship links education and work by giving students on-the-job training while they are still in school. Apprenticeships aren't new to America, but traditionally they have been run by labor unions, particularly those in the construction trades, and they involve only small numbers of adult workers. In the United States today,



there are formal apprenticeship programs for some 415 trades involving over 300,000 registered apprentices. The average age is 27.

Germany, in contrast, has had an apprenticeship system in place for 700 years. Currently, the country gets 70 percent of its workforce through youth apprenticeships, including those in white-collar professions such as banking and insurance. Even students who plan to attend uni-

versity often spend a few years as apprentices so they will have a marketable skill to fall back on. As a result, both white- and blue-collar workers in Germany have a better general education and work ethic than most Americans of the same age.

Why is the German system such a success? Because it demands investment from everyone involved—employers, labor unions, schools, and young people—and produces direct returns. Companies share the cost with government by paying small, union-negotiated stipends to apprentices and by providing much of the on-site training. A payroll tax earmarked for training ensures that all businesses participate. Schools offer a wide variety of vocational courses and permit part-time attendance.

German apprentices benefit from this highly formalized system by receiving a mobile and respected credential, good prospects of a job after training, and acclimation to the world of work. While recent social and economic changes have presented new challenges to its apprenticeship system, German society continues to enjoy comparatively low youth unemployment and a workforce that is more highly skilled, educated, and motivated than that of the United States.

Like any foreign import, the German model of youth apprenticeship may require some modification to work well in America, a country that is geographically, racially, and ethnically diverse. But the biggest change will have to come from Americans themselves, many of whom are suspicious of a system that induces students to make career choices at a young age and requires a large amount of government oversight. But this and other shortcomings should not and cannot prevent business, schools, and government from working to create an American version of youth apprenticeship. The alternative—maintenance of the status quo and the gradually deteriorating quality of the workforce that is certain to result—is simply too costly.

How Apprenticeships Can Work for Business

Apprenticeships will not succeed in the United States unless business thinks they are a sound investment. After all, American employers, like their European counterparts, will have to shoulder most of the cost. Apprentice wages are only the beginning: companies will also likely be expected to provide classroom and work space as well as older workers to act as teachers.

The most formidable challenge youth apprenticeships pose for business, however, is a transformation in thinking. Right now, most companies do little to train even their adult workers, let alone youths. Most skilled workers arrive at the factory gate or personnel office clutching a certificate from a proprietary school or community college. Only a small percentage of front-line workers receive any formal training once they are on the job, and this is usually limited to orientations or short courses. The lion's share of training goes to upper- and middle-managers—people who usually have a college degree. As a result, most firms have no experience teaching young people or working with schools.

The first step toward the formation of a U.S. apprenticeship system, therefore, is to create incentives for businesses to become partners with schools, hire young people as first-time workers, provide appropriate training, and assume a portion of the cost. What shape these incentives might take is unclear. The main problem is that business is diffuse, with few natural links between company X and company Y. There is no easy way to tap into such a scattered and diverse set of institutions. Moreover, what would motivate a Fortune 500 firm in Dallas to support apprenticeships would not necessarily motivate a small business owner in Dubuque.

If a youth apprenticeship system is successful, businesses will be able to see clearly that it directly benefits them. This should motivate companies to invest more ac-

tively and enthusiastically in the skills of their employees. The American firm must overcome its persistent caricature as an organization that solves "cost problems" by simply slashing training, firing workers, creating more "dumbed-down" jobs, and sending work overseas.

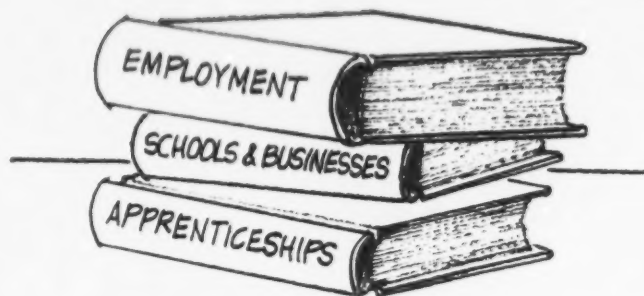
Schools as Platforms for Change

Most employers require a high school diploma for all new hires, yet few believe it indicates educational achievement. More than 90 percent view it only as proof that the student did not drop out. Indeed, most companies do not even request a school transcript before hiring a young person. This lack of faith in high school education should come as no surprise. Currently, neither teachers nor managers give students destined for the factory or sales floor clear signals about why academic success is important.

Because apprenticeships hold out the promise of training and employment, they give young people practical reasons to do well in school. A student apprenticing as a home health aide, for instance, would have real-life incentives to learn biology. Only a small fraction of people learn best by passively listening to a teacher lecture in front of a class. Most learn by doing. In Germany, apprenticeships help motivate students to achieve academically; they are likely to do the same in America.

For apprenticeships to succeed, however, schools will have to change their methods, schedules, and assumptions. Few teachers are familiar with local, regional, or national job requirements. They must become more knowledgeable about employment and learn to work as partners with the business community. Teaching methods must also reinforce what apprenticing students learn on the job. Ultimately, teacher training itself should include more up-to-date information about the needs of the workplace.

Because apprenticeships require students to spend



HOMEWORK FOR SCHOOLS

some time each week away from the classroom in a work situation, the 8 a.m. to 3 p.m., September through May schedule now common at most schools will have to become more flexible to adapt to student and employer needs. Parents, who are likely to view any diversion from a pre-college course of study with alarm, must also be educated to the benefits of apprenticeship. Schools can smooth this process by providing clear and meaningful information regarding these benefits to students and their families.

Even if these changes are made, the question remains: when should apprenticeships be introduced to schools? Most of the current experiments target eleventh- or twelfth-graders, but there is evidence that this is too late for many youngsters. Studies of dropouts have found that most students make the decision to leave school around the ninth grade, even if they actually drop out much later. Apprenticeships might better serve young people if started in junior high school.

The Role of Government

The federal government can and should encourage employers and schools to work together to create youth apprenticeships. Consistent with American values and tra-

ditions, Washington's role should be enabling, not coercive.

The most important and immediate step government can take is to rewrite federal regulations to spell out exactly how youth apprenticeship fits into existing laws governing child labor, the minimum wage, and occupational safety and health. Such laws would quickly eliminate obstacles that might potentially discourage business from training apprentices.

The test of how serious American enterprise is about a system of youth apprenticeships may come down to a discussion of anti-poaching laws, similar to those now in effect in Great Britain—laws that slap a penalty on companies that offer no youth training yet hire away apprentices trained by others. Instituting a payroll tax to help subsidize the costs of apprenticeships would also ensure that all companies share in the burdens and benefits of training young people. *America's Choice*, for instance, suggests that U.S. companies be required to devote 1 percent of payroll to training, with firms failing to establish training programs liable for a new training tax.

There are also pro-active steps the federal government can take to promote youth apprenticeships. To assist stu-

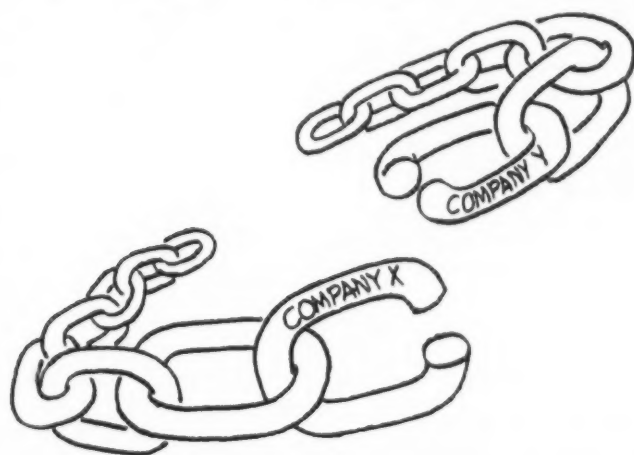
dents and schools, government might provide direct subsidies to young people pursuing apprenticeships, or alternatively, hold out the promise of future loans or grants for education or training to those who successfully complete apprenticeship programs.

In addition, Washington could pass a national youth service law. The United States is one of the few advanced industrialized countries that does not have a national program of compulsory youth service. Until the all-volunteer army supplanted it, the military draft was the largest government-supported program for teaching young people technical skills and the deportment necessary to secure and retain a job. In recent years, several national service bills have come before the U.S. Congress. The programs outlined in this legislation would help prepare young people for later entry into business- or union-sponsored apprenticeships. At the same time, the apprenticeship model—skilled professionals teaching young people how to build roads, repair bridges, conserve parks and forests, care for the elderly—could easily be incorporated into a national service law.

States also have a strong role to play. State education departments, for instance, could fund pilot apprenticeship programs, provide training grants to schools interested in developing apprenticeships, and help bring administrators and teachers up to speed on job skills and the needs of business. Appropriate agencies could convene focus groups made up of employers and schools to discuss how apprenticeships might be achieved statewide. Using their contract system, states could require firms doing business with the state to take on a certain number of apprentices. And, finally, states could perform an important evaluation function by collecting and analyzing data on all apprenticeship programs going on within their borders.

Current Experiments

Several states and individual businesses are now experimenting with youth apprenticeships. These pilot efforts



represent promising initiatives that could easily be copied by others or incorporated as part of a more sweeping national apprenticeship system.

Arkansas is currently implementing a statewide Youth Apprenticeship Initiative that will set up five to ten European model apprenticeship programs, supported in part by a New Educational Excellence Trust Fund and a 0.5 percent increase in the corporate income tax. In Oregon, a pilot program aims to provide occupational training for 100 high school students enrolled in technical vocational courses. Participating employers pay wages to the students, who work up to 20 hours a week; in return, the businesses receive an offsetting tax credit. In Philadelphia, the High School Academies project represents a joint effort between local employers and the Philadelphia Public Schools to set workforce training standards and to train high school students in skills that are in large part defined by local employers.

Under a program called Quality Connection, funded in part by the U.S. Department of Labor, the Bank of America and Sears, Roebuck Company are preparing students in San Francisco for banking jobs and students in Chicago for positions as appliance technicians. The apprenticeships involve full-time employment between a student's junior and senior years and part-time work during the academic year.

Scattered though they are, these projects serve as strong demonstrations of the kinds of change that can and must occur to make opportunities for youth apprenticeships more widely available.

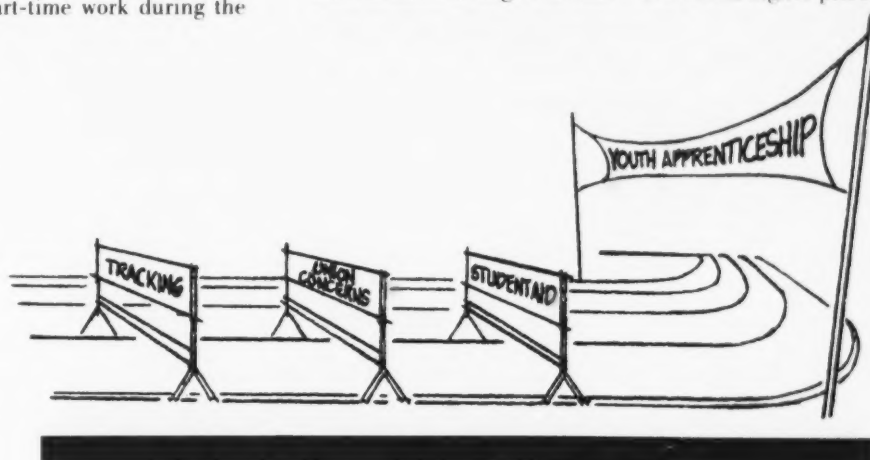
Obstacles to Change

It is essential to America's future prosperity and social

harmony that a national system of youth apprenticeship be established that addresses the need for more modern, competitive skills. However, it will remain only a good idea unless a number of hurdles are overcome:

Tracking. Many parents and educators worry that apprenticeships will unfairly track students into vocations at a young age, diverting them from a pre-college course of study—the traditional path for advancement in the United States. The fact is, however, that an informal but absolute system of tracking already operates to separate young people in schools, often arbitrarily, into those bound for college and those bound for work. Under an apprenticeship system, schools would have to become more explicit about these choices, help advise students and parents about training opportunities, and perhaps even help create new ways of evaluating students' talents and abilities. At the same time, those bound for apprenticeships, like those planning for immediate enrollment in college following graduation from high school, will need access to a common core curriculum that is rigorous in basic academic subjects.

Union Concerns. Labor unions, which have run their own training programs for decades, see apprenticeships as a threat. They worry that young, cheaper apprentices will send salaries through the floor—and older, higher-priced



veterans to the unemployment line. Contracts negotiated with teachers unions, custodian unions, and other labor groups may make it all but impossible to institute the flexible hours and school calendars necessary to make apprenticeships work.

Student Aid. Presumptions built into the federal student aid system represent a particularly daunting obstacle for potential apprentices. Currently, a student who enrolls in college can get thousands of dollars annually in public and private assistance. Yet few subsidies are available to help young workers during the comparable four years after they leave high school—and there is no assistance whatsoever during high school to pursue work-based training. Federal job training programs funded under the Job Training Partnership Act (including the Jobs Corps and the Summer Training and Education Program) serve only a fraction of those eligible.

Summary

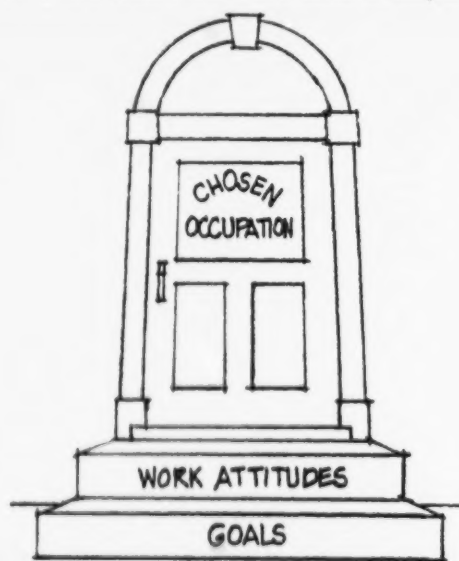
Youth Apprenticeships have the potential to address simultaneously two national dilemmas: how to prepare American business and its workers for a high-skills future, and how to upgrade the academic skills of all students. If the United States is to succeed in an increasingly competitive global economy, those who are destined for college must be given training for work as well as a thorough grounding in the three R's.

The responsibility for a successful youth apprenticeship program rests jointly with schools and businesses. To sustain support, particularly of companies, an apprenticeship program must demonstrate its ability to provide a skilled labor force at lower cost than would a non-apprentice, government-financed, supplemental training program.

Corporate self-interest and national economic survival are the main engines driving the movement for American apprenticeships, but they are by no means the only ones.

Giving students an opportunity to learn by doing is certain to have beneficial spin-off effects. Enhanced motivation in the classroom should lead to lower dropout rates, better grades, and improved discipline and workplace comportment. One of the greatest benefits of apprenticeships may be simply that they help young people to form achievement goals and work attitudes that enable them to move beyond the entry level, whatever their chosen occupation.

The future of youth apprenticeship is not in the hands of students, of course. It is in the hands of companies and



schools, which must work together if the concept is ever to take root in the United States in a significant way. Forging such a partnership will not be easy. It will require a willingness to change old ways of thinking and to suspend mutual distrust. But both sides stand to benefit from a better trained workforce and more motivated students. As important, the cost of doing nothing is a future neither companies nor schools, nor America itself, can afford to contemplate.

by Susan E. Tifft

The National Center on the Educational Quality of the Workforce

EQW is a partnership between one of this nation's premier business schools and one of its leading graduate schools of education. Established by the University of Pennsylvania's Wharton School and Graduate School of Education under a cooperative agreement with the U.S. Department of Education, **EQW's** program of research and policy analysis takes as its principal challenge the renewal of American competitiveness through leveraged investments in the quality of the nation's workforce.

The **EQW** research agenda focuses on four broad questions:

1. What do employers need to know to better use the skills their workers bring with them and acquire in the workplace?
2. How can schools and other providers become more effective suppliers of skilled and disciplined workers?
3. How can workers develop more complete skills portfolios that combine the competencies and disciplines a productive economy requires?
4. What is the best role for public policy in the development of a work-related education and training market that efficiently links consuming firms, supplying schools, and educated workers?

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The research for this issue included the following:

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